



**BIOL 2402.101CL**  
**Anatomy and Physiology II**  
**Summer I 2022**  
**Monday-Thursday 12:00-4:40PM**  
**Steam Bldg. #22, Room 334**

**Instructor Information:** Professor Smith, email:ssmith10@com.edu, office #: 409-933-8436

**Student hours and location:** Virtually by appointment, In-person Friday's @ 11:40am; Office:325-22

**Required Textbook/Materials:**

- Marieb, E.N. & Hoehn, K., 2019. Human Anatomy and Physiology, 11th ed. Boston, MA; Pearson Education, Inc. **(eBook via VitalSource already loaded in BB = NO PURCHASE REQUIRED)**
- Amerman, E., 2017. Exploring Anatomy & Physiology in the Laboratory, 3rd edition. Englewood, Colorado, Morton Publishing Company (customized for COM) ISBN-13: 978-1-61731-955-6 (**Lab Manual**)

**Course Description:** Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

**Course requirements:**

**Lecture Exams** & **Comprehensive Final Exam**

There are 4 exams and 1 comprehensive final exam. Each lecture exam consists of multiple-choice, fill-in-the-blank, matching, true-false, essay, and identification. Test dates are listed in the schedule below.

**Mastering A&P Assignments via Pearson (but accessible via BlackBoard)**

You will have 5 online assignments in the Modified-Mastering A&P due by 11:59pm on specified days.

**Required online component** and you will access to it via BB.

**Lab Activity and Lab Activity Quizzes (LAQ) via BlackBoard**

There are 12 optional online lab activities. Each activity reinforces the material that will appear on the 2 scheduled Lab Practicals. You must watch all videos uploaded to the Lab Material area to answer the lab activity quizzes. You must log into BB to complete the quizzes but are not required to use Respondus.

**Lab Practicals**

There will be 2 lab practicals during this course. Practical dates are listed in the syllabus document.

### ***Professionalism***

All email and in-person communication need to remain respectful. I am open to concerns, comments, and constructive criticism. However, please make sure all comments are respectful. Professionalism is 2% of your grade, **please be sure to identify you name and class when emailing with a clear explanation of the purpose of your email.** This includes following dress code in lab, clear concise email with name and course number, last minute technical problems because of procrastination, not prepared for lab.

### ***Bonus Points***

Bonus points are not part of the course requirements but are opportunities to earn extra points will be offered throughout the semester.

### **Determination of Course Grade/Detailed Grading Formula:**

<b>Course Assessment</b>	<b>Total Points</b>	<b>Percentage of Course</b>
<b>LECTURE PORTION</b>	<b>700</b>	<b>70.0%</b>
Syllabus Quiz	5 points	0.5%
Read Me First Quiz	5 points	0.5%
Professionalism	20 Points	2.0%
Mastering A&P Assignments (5)	200 (40 pts each)	40.0 %
Lecture Quizzes (4)	80 (20 pts each)	8.0 %
Lecture Exams (4)	340 (85 pts each)	34.0 %
Comprehensive Final Exam	50 points	5.0%
<b>LAB PORTION</b>	<b>300</b>	<b>30.0%</b>
Lab Safety Quiz	10 points	1.0%
LAQ (12)	120 points (10 pts)	12.0%
Online Lab Practicals (2)	170 (85 pts)	17.0%
<b>TOTAL POINTS</b>	<b>1000</b>	<b>100%</b>

### **Grading Scale:**

- A** A Sum of the points earned for course assessments that equals between 900 and 1000 points
- B** A Sum of the points earned for course assessments that equals between 800 and 899 points
- C** A Sum of the points earned for course assessments that equals between 700 and 799 points
- D** A Sum of the points earned for course assessments that equals between 600 and 699 points
- F** A Sum of the points earned for course assessments that equals below 600 points.
- I** An incomplete may be assigned at the discretion of the instructor in accordance with the policy.
- W** A withdrawal may be assigned in accordance with college policy.

### **Science Lab Policy (Please Read Carefully)**

This course consists of both a lecture and laboratory grade component. Students must earn a 70% or better in the laboratory component to successfully pass the course. **Earning less than 70% in the laboratory component will result in an F for the course regardless of the lecture grade.** Passing the laboratory component and failing the lecture component will not guarantee a passing grade for the course. Deviations from this policy will be at the sole discretion of the instructor.

**Late Work, Make-Up, and Extra-Credit Policy:**

**EXAMS:** Exams are administered in class. Make-ups are allowed at the discretion of the instructor. A note from a doctor or employer may be required.

**LAB PRACTICALS:** Administered via in class. Make-ups are allowed at the discretion of the instructor. A note from a doctor or employer may be required.

**MISSED ASSIGNMENTS:** Please contact the instructor if you missed an assignment to make arrangement to complete the missed assignment. This is at the instructor discretion.

**Attendance Policy:** Students are required to come to lab to complete the face-to-face laboratory exercises required in the laboratory component of this course. **Absences in two required lab meetings will result in a "F" for the course grade unless there is a documented excuse approved by the instructor** (e.g. illness or death in the family).

**Communicating with your instructor:** **ALL electronic communication with the instructor must be through your COM email.** Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. (Faculty may add additional statement requiring monitoring and communication expectations via Blackboard or other LMS)

Student Learner Outcome (SLO)	Maps to Core Objective(s)	Assessed via this Assignment
1. Use anatomical terminology to identify and describe locations of major organs of each system covered.		Exam 1-4
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Exam 1 Essay Questions
3. Describe the interdependency and interactions of the systems.		Skeletal System Case Study
4. Explain contributions of organs and systems to the maintenance of homeostasis.	<b>CT</b>	<b>Skeletal System Case Stud</b>
5. Identify causes and effects of homeostatic imbalances.		Case Study Activity
6. Describe modern technology and tools used to study anatomy and physiology.		Muscle Fatigue lab
7. Apply appropriate safety and ethical standards.		Lab Safety Quiz
8. Locate and identify anatomical structures.		Lab Practical 1 & 2
9. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.		Lab Practical 1 & 2
10. Work collaboratively to perform experiments.	<b>TW</b>	<b>pH Lab</b>
11. Demonstrate the steps involved in the scientific method.		<b>Conductivity Lab</b>
12. Communicate results of scientific investigations, analyze data and formulate conclusions.	<b>CS</b>	<b>Conductivity Lab</b>
13. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations, and predictions.	<b>EQS</b>	<b>Conductivity Lab</b>

**Academic Dishonesty:** Disciplinary actions will be taken for students who exhibit disorderly conduct, cheat on exams, submit plagiarized work (see below), or are involved in collusion (helping others cheat or plagiarize) as defined in the Student Handbook under the heading, "Discipline and Penalties." The maximum penalty imposed for violations will be an F in the course. The student will also be referred to the Associate Vice President of Student Success and Conduct for further disciplinary action. Please read through the "Standards of Student Conduct" in the Student Handbook for a more complete discussion of these issues and your rights and responsibilities.

**Student Concerns:** If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Sheena Abernathy, Chair of the Science Department, at 409-933-8330 or by email: [sabernathy@com.edu](mailto:sabernathy@com.edu).

**Course outline:** (TENTATIVE, SUMMER 2022)

WK	DAYS	LECTURE	LAB On-Campus	ONLINE PORTION
1	06/07 to 6/13	CH16: Endocrine System CH18: The Heart CH19: Blood Vessels CH17: The Blood <b>Asgn 1 (CH16, 18, 19)</b>	<b>DAY 1 &amp; 2</b> Lab Safety Ex. 16-1 Endocrine System Anatomy Ex. 16-2 Endocrine Histology Ex. 17-1 Anatomy of the Heart Ex 17.-1 Pig Heat Dissection	Ex. 16-1 & 16-2 <b>LAQ 1 (online)</b> Ex. 17-1 Anatomy of the Heart <b>LAQ 2 (online)</b>
		<b>Read Me First Quiz</b> <b>Syllabus Quiz</b> <b>Lecture Quiz 1</b>	<b>DAY 3 &amp; 4</b> Ex. 19-5 ECG & Vernier Handout Ex. 19-1 Heart Auscultation Ex. 14-4 Blood pressure Ex. 14-4 Pulse Palpation Ex. 18-1 Major Arteries Ex. 18-2 Major Veins	Ex. 19-5 ECG & Vernier EKG Ex. 19-1 (Auscultation) <b>LAQ 3 (online)</b> Ex. 18-1 Major Arteries Ex. 18-2 Major Veins Ex. 18-5 Clinical Applications <b>LAQ 4 (online)</b>
2	6/13 to 6/19	<b>Exam 1 -06/13</b> CH20: Lymphatic System CH21: Immunity CH22: Respiratory  <b>Assignment 2 (CH 17, 20, 21, 22)</b> <b>Lecture Quiz 2</b>	<b>DAY 1 &amp; DAY 2</b> Ex. 20-1 Formed Elements of blood Ex. 20-2 ABO & Rh blood groups Ex. 20-3 Murder Mystery Ex. 21-2 Lymphatic Organ Anatomy Ex. 21-2 Lymphatic Organ Histology	Ex. 14-4 ANS: Blood pressure Ex. 18-5 Pulse Palpation <b>LAQ 5 (online)</b>
			<b>DAY 3 &amp; DAY 4</b> Ex. 22-1 Resp. Anatomy Ex. 23-2 Lung Volumes & Capacities Construct a Lung Handout	Ex. 22-1 Respiratory System Anatomy Ex. 23-2 Measuring Pulmonary Volumes/Capacities <b>LAQ 7 (online)</b>
3	6/20 to 6/26	<b>Exam 2 – 06/20</b> CH23: Digestive System CH24: Nutrition CH25: Urinary System CH26: Fluid Balance <b>Asgn 3 (CH23, 24, 25,26)</b> <b>Lecture Quiz 3</b>	<b>DAY 1 &amp; DAY 2</b> <b>Lab Practical 1</b> Ex. 24-1 Digestive System Anatomy Lactase Enzyme Assay Handout Ex. 2-3 Enzymes/Chem. Rx (DEMO)	Ex. 24-1 Digestive System Anatomy Ex. 2-3 Enzymes and Chemic <b>LAQ 8 (online)</b>
			<b>DAY 3 &amp; DAY 4</b> Ex. 25-1 Urinary System Anatomy Pig Kidney Dissection Ex. 26-1 The Model Kidney Urinalysis Handout	Ex. 25-1 Urinary System Anatomy <b>LAQ 9 (online)</b>
4	6/27 to 7/03	<b>Exam 3 – 06/27</b> CH27: Reproductive System CH28: Development CH29: Heredity <b>Assignment 4 (CH27, 28, 29)</b> <b>Lecture Quiz 4</b>	<b>DAY 1 &amp; DAY 2</b> Ex. 27-1 Male Reproductive Anatomy Ex.27-2 Female Reproductive Anatomy Pig Uterus Dissection Pregnancy Kit/Barrier	Ex. 27-1 Ex. 27 - 2 <b>LAQ 11 (online)</b> Ex. 28-1 Ex. 28-2 <b>LAQ 12(online)</b>
			<b>DAY 4 Animal Dissection</b>	
5	7/04 to 7/09	July 4 <sup>th</sup> – Holiday <b>Exam 4 – 07/06</b> <b>Comprehensive Final 07/08</b>	<b>Lab Practical 2 07/07</b>	

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## Institutional Policies and Guidelines

**Grade Appeal Process:** Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook. <[https://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf). *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.* [https://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf)

**Academic Success & Support Services:** College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

**ADA Statement:** Any student with a documented disability needing academic accommodations is requested to contact Holly Bankston at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). The Office of Services for Students with Disabilities is located in the Student Success Center.

**Counseling Statement:** Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). Counseling services are available on campus in the student center for free and students can also email [counseling@com.edu](mailto:counseling@com.edu) to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

**Textbook Purchasing Statement:** A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Withdrawal Policy:** Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1<sup>st</sup> 5-week session is July 1. The last date to withdraw from the 10-week session is August 1. The last date to withdraw for the 2<sup>nd</sup> 5-week session is August 5.

**FN Grading:** The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend

class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the F<sub>N</sub> grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F<sub>N</sub> grade.

**Early Alert Program:** The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

**Resources to Help with Stress:**

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at [deanofstudents@com.edu](mailto:deanofstudents@com.edu) or [communityresources@com.edu](mailto:communityresources@com.edu).